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CT-501/CT/5th Sem/2014/N

CONSTRUCTION TECHNOLOGY

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

1. Describe the factors to be considered while selecting bridge site. 10
2. Explain the method of construction of bituminous road as per IRC code of practice. 10
3. The approximate cost of one pier and one superstructure span for a multiple span bridge for various lengths of span are tabulated as follows : 10

Span(m)	Cost of one pier (Rs.)	Cost of one superstructure
10	25000	7000
15	28000	13815
20	32500	31000
25	33700	36000
30	34800	41400

Determine the economic span.

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4. Distinguish between the following : $5 \times 2 = 10$
- (i) Rigid pavement and flexible pavement
 - (ii) Bridge and culverts
 - (iii) Canals and aqueduct
 - (iv) National highway and State highway
 - (v) Skid and slip.
5. Explain different components of RCC bridge with a neat sketch. 10
6. Explain the following : $5 \times 2 = 10$
- (i) Abutments
 - (ii) Economic span
 - (iii) Scouring depth
 - (iv) Railway crossings
 - (v) WBM.
7. What are the different types of bridge foundations ? Explain the general principles of design of bridge foundations. 10